

REMARKS

Claims 15-45 are pending in the present application. No claims have been amended and no new matter has been added.

I. OBJECTIONS

A. The Specification has been amended with this response to be in compliance with 37 C.F.R. § 1.78 to indicate the status of the parent non-provisional application which has issued as a patent.

B. Claims 15-45 stand rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-22 of U. S. Patent No. 6,618,822. Attached herewith is a Terminal Disclaimer in compliance with 37 C.F.R. § 1.321(c) disclaiming that portion of the term of any patent granted on the present application extending beyond the term of United States Patent No. 6,618,822. Applicants submit that the Terminal Disclaimer overcomes the double patenting rejection.

II. CLAIM REJECTIONS UNDER 35 U.S.C. § 103

15, 19, 21, 26, 31, 36, and 41

Claims 15, 19, 21, 26, 31, 36, and 41 stand rejected under 35 U.S.C. 103(a) as being unpatentable over “Independent Recovery in Large-Scale Distributed Systems” written by Peter Triantafillou (Triantafillou) taken with “A System Prototype for Warehouse View Maintenance” written by Wiener et al. (Wiener). Applicants respectfully traverse. Applicants note that to establish a prima facie case of obviousness, the prior art references must teach or suggest all the claim limitations. Further, the teaching or suggestion to make the claimed combination and the

reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. *In re Vaeck*, 941 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (MPEP § 2143.03).

A. For claim 15, there are one or more claimed limitations that are not disclosed, taught or suggested by the cited references. Claim 15 recites the following limitations:

selecting one or more of said **database recovery logs** to access;
establishing a view of said one or more **database recovery logs**;
insulating said view from a format of said one or more database recovery logs;
issuing a database statement to query said view; and
retrieving data from said one or more database recovery logs in response to said database statement.

1. Claim 15 recites the limitations "selecting one or more of said database recovery logs to access; establishing a view of said one or more database recovery logs."

Applicants agree with the Examiner that Triantafillou fails to disclose establishing a view of said one or more database recovery logs. The Office Action cites that page 3, section 2.2 of Wiener allegedly discloses establishing a view of said one or more database recovery logs. The Office Action also asserts that Wiener proposed the use of a materialized view for system crash recoveries on page 7, column 2, paragraph 2. Applicants respectfully submit that Wiener does not teach or suggest establishing a view of *a selected one or more database recovery logs*.

Wiener discloses the implementation of a prototype to integrate data from distributed and autonomous sources for a warehouse. (Wiener, page 1, Introduction). Specifically, Wiener teaches an integration component responsible for collecting and maintaining the materialized views for the warehouse. (Wiener, page 1, Introduction). As discussed above, the Office Action asserts that Wiener proposed the use of a materialized view for system crash recoveries on page 7, column 2, paragraph 2. However, the cited paragraph of Wiener states:

We are also designing algorithms for crash recovery; in order to recover from a crash, not only do all source and view definitions need to be persistent (they already are), but also all modifications currently being processed must be remembered and recovered. (Wiener, page 7, column 2, paragraph 2).

This section of Wiener does not propose or suggest using a materialized view for system crash recoveries as suggested by the Office Action. Instead, this section of Wiener is merely stating that if there is a materialized view, then the source and view definitions for the materialized view must be handled in a way to make them persistent. There is nothing in this section that teaches or suggests using a recovery log nor that a view is used for system crash recoveries. This section of Wiener is only directed toward the implementation and crash recovery of a materialized view for a warehouse, and does not disclose *establishing a view of a selected recovery log* of a database as presently claimed.

For at least this reason, Applicants respectfully submit that claim 15 is allowable over Triantafillou taken with Wiener.

2. Applicants further submit that even if Triantafillou and Wiener taught the claimed limitations, there is no motivation to combine the references.

According to the Office Action, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve the existing recovery protocol with the system crash recovery algorithm of Wiener and Triantafillou using materialized views for improved data access and availability. Applicants respectfully disagree. Applicants submit that there is no suggestion or motivation to make the stated combination.

Triantafillou is directed toward independent recovery protocols for large systems with replicated data. (Triantafillou, Abstract). Triantafillou recognizes that distributed systems provide the luxury of replicating data objects in order to increase their availability and to reduce the costs associated with accessing remote data. (Triantafillou, page 812, Introduction). The basic principle behind Triantafillou is to exploit the existence of multiple replicas by allowing temporary inconsistent replicas to exist with the reassurance that there is another consistent replica to rely upon. (Triantafillou, page 814, section 3.1). Thus, the premise behind Triantafillou is to preserve the *decentralization* of data with replication in distributed systems with their recovery protocols.

In contrast, Wiener discloses the implementation of a prototype to integrate data and *centralize* data from distributed and autonomous sources for a warehouse in a materialized view. (Wiener, page 1, Introduction). The crash recovery algorithms proposed in Wiener, as discussed above, are directed toward the recovery of this integrated, *centralized* view of data from the distributed sources.

Thus, the Triantafillou recovery protocols require the replicated, *decentralization* of data for distributed systems. The proposed modification of Triantafillou to incorporate an integrated, *centralized* material view of data from distributed systems from Wiener would render Triantafillou unsatisfactory for its intended purpose of recovery protocols for large-scale systems with replicated data.

MPEP 2143.01 explicitly notes that there cannot be a motivation or suggestion to make a proposed modification if the proposed modification would render the prior art being modified unsatisfactory for its intended purpose. Since the proposed modification would render

Triantafillou inoperable and unsatisfactory for its intended purpose, Applicants respectfully submit that there is no motivation to combine Triantafillou with the other cited documents to achieve the claimed invention that recites views of database recovery logs. It is respectfully submitted that claims 15-45 are allowable over these cited documents.

For at least this reason, Applicants respectfully submit that claim 15 is allowable over Triantafillou taken with Wiener.

B. Claims 26 and 36 recite sufficiently the same limitations as claim 15, and therefore are patentable over Triantafillou taken with Wiener for the same reasons.

C. Claims 16-25 and 37-45 depend on claims 15, 26, and 36, and therefore, are patentable over Triantafillou taken with Wiener for at least the same reasons.

18, 20, 29, 30, 39, and 40

Claims 18, 20, 29, 30, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Triantafillou taken with Wiener as applied to claims 15, 19, 21, 26, 31, 36, and 41 above, and in further view of "Database Management Systems" written by Raghu Ramakrishnan (Ramakrishnan). Applicants respectfully traverse.

A. As indicated above, independent claims 15, 26, and 36, and their respective dependent claims are patentable over Triantafillou taken with Wiener. Applicants respectfully submit that Ramakrishnan is both not relied upon to disclose the limitation of establishing a view of a selected

one or more database recovery logs of independent claims 15, 26, and 36, and does not disclose the deficiencies present in Triantafillou taken with Wiener. Ramakrishnan teaches using information in a log file to restart a system after a system crash. (Ramakrishnan, p. 529 and Figure 18.4). Specifically, Ramakrishnan discloses using the contents of the log file to allow for restoring the system that crashed in a series of phases. (Ramakrishnan, p. 529 and Figure 18.4) Ramakrishnan is silent with respect to establishing a view of a selected one or more recovery logs. Thus, Ramakrishnan does not disclose the limitation of establishing a view of a selected one or more database recovery logs.

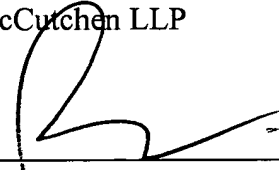
CONCLUSION

If the Examiner has any questions or comments, please contact the undersigned at the number listed below.

The Commissioner is authorized to charge any fees due in connection with the filing of this document to Bingham McCutchen's Deposit Account No. **50-2518**, referencing billing number **7011443001**. The Commissioner is authorized to credit any overpayment or to charge any underpayment to Bingham McCutchen's Deposit Account No. **50-2518**, referencing billing number **7011443001**.

Respectfully submitted,
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